## IN THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

## **CLAIM LISTING**

## 1. (Currently Amended) A compound of formula I

wherein

each n is one or two independently

R<sup>1</sup> is C=O; C=S; C<sub>1</sub>-C<sub>2</sub> alkyl alkylene optionally substituted with one or more R<sup>4</sup> independently; C<sub>2</sub> alkenyl alkenylene substituted with one or more R<sup>4</sup> independently; C<sub>2</sub> alkynyl alkynylene; C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>3</sub>-C<sub>7</sub> cycloheteroalkyl optionally substituted with one or more R<sup>4</sup> independently; aryl optionally substituted with one or more R<sup>4</sup> independently; aryl C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with one or more R<sup>4</sup> independently; heteroaryl optionally substituted with one or more R<sup>4</sup> independently; heteroaryl C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with one or more R<sup>4</sup> independently; perhalo C<sub>1</sub>-C<sub>10</sub> alkyl; perhalo C<sub>1</sub>-C<sub>10</sub> alkyloxy;

 $R^2$  is H;  $C_1$ - $C_7$  alkyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_7$  alkenyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_7$  alkynyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloalkyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloheteroalkyl optionally substituted with one or more  $R^4$  independently; aryl optionally substituted with one or more  $R^4$  independently; aryl  $C_1$ - $C_3$  alkyl optionally substituted with one or more  $R^4$  independently; heteroaryl  $C_1$ - $C_3$  alkyl

optionally substituted with one or more  $R^4$  independently; heteroaryl optionally substituted with one or more  $R^4$  independently, -SH; -SR $^5$ ; SOR $^5$ ; SO2 $R^5$ ; -CHO; -CH(OR $^5$ )2; carboxy; -CO2 $R^4$ ; NHCONNH2; -NHCSNH2; -NHCONH2; -NHCOR $^4$ ; -NHSO2 $R^5$ ; -O-CO-(C1-C5) alkyl optionally substituted with one or more  $R^4$  independently; cyano; nitro; halogen; hydroxy; perhalo C1-C7 alkyl; perhalo C1-C7 alkyloxy; -SO2NH2; -SO2NH( $R^5$ ); -SO2( $R^5$ )2; -CONH2; -CSNH2; -CON2H3; -CONH( $R^5$ ); -CON( $R^5$ )2; C1-C10 alkyloxy optionally substituted with  $R^4$  independently; C2-C10 alkenyloxy optionally substituted with  $R^4$  independently; heteroaryloxy optionally substituted with  $R^4$  independently; heteroaryloxy optionally substituted with  $R^4$  independently;

R<sup>3</sup> is H; C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>2</sub>-C<sub>10</sub> alkenyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>2</sub>-C<sub>10</sub> alkynyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with one or more R<sup>4</sup> independently; C<sub>3</sub>-C<sub>7</sub> cycloheteroalkyl optionally substituted with one or more R<sup>4</sup> independently; aryl optionally substituted with one or more R<sup>4</sup> independently; aryl C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with one or more R<sup>4</sup> independently; heteroaryl C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with one or more R<sup>4</sup> independently; heteroaryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-NH(CH<sub>2</sub>)<sub>1.4</sub>NH-aryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-NH(CH<sub>2</sub>)<sub>1-4</sub>NH-heteroaryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O(CH<sub>2</sub>)<sub>1-4</sub>NH-aryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O(CH<sub>2</sub>)<sub>1-4</sub>NH-heteroaryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O(CH<sub>2</sub>)<sub>1.4</sub>O-aryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O(CH<sub>2</sub>)<sub>1-4</sub>Oheteroaryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-S(CH<sub>2</sub>)<sub>1</sub>. <sub>4</sub>NH-aryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-S(CH<sub>2</sub>)<sub>1</sub>. <sub>4</sub>NH-heteroaryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-S(CH<sub>2</sub>)<sub>1.4</sub>S-aryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-S(CH<sub>2</sub>)<sub>1-4</sub>S-heteroaryl optionally substituted with one or more R<sup>4</sup> independently; C<sub>1</sub>-C<sub>10</sub> alkyl-O-C<sub>1</sub>-C<sub>5</sub>alkyl optionally substituted with one or more R<sup>4</sup>; -NHCOR<sup>4</sup>; -NHSO<sub>2</sub>R<sup>5</sup>; -O-CO-(C<sub>1</sub>-C<sub>5</sub>) alkyl optionally substituted with one or more R<sup>4</sup> independently; -SH; -SR<sup>5</sup>; -SOR<sup>5</sup>; -SO<sub>2</sub>R<sup>5</sup>; -CHO; -CH(OR<sup>5</sup>)<sub>2</sub>; carboxy; cyano; nitro; halogen; hydroxy; -SO<sub>2</sub>NH<sub>2</sub>; -SO<sub>2</sub>NH(R<sup>5</sup>);

 $-SO_2N(R^5)_2$ ;  $-CONH_2$ ;  $-CONH(R^5)$ ;  $-CON(R^5)_2$ ;  $-CSNH_2$ ;  $-CONHNH_2$ ;  $-CO_2R^4$ ;  $-NHCNHNH_2$ ;  $-NHCSNH_2$ ;  $-NHCONH_2$ ;

R<sup>4</sup> is C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with one or more R<sup>8</sup> independently; C<sub>2</sub>-C<sub>10</sub> alkenyl optionally substituted with one or more R<sup>8</sup> independently; C<sub>2</sub>-C<sub>10</sub> alkynyl optionally substituted with one or more R<sup>8</sup> independently; C<sub>3</sub>-C<sub>7</sub> cycloalkyl optionally substituted with one or more R<sup>8</sup> independently; C<sub>3</sub>-C<sub>7</sub> cycloheteroalkyl optionally substituted with one or more R<sup>8</sup> independently; anyl optionally substituted with one or more R<sup>8</sup> independently; heteroaryl optionally substituted with one or more R<sup>8</sup> independently; amino; amino substituted with one or more C<sub>1</sub>-C<sub>10</sub> alkyl optionally substituted with one or more R<sup>8</sup>; amino substituted with one or two aryl optionally substituted with one or more R<sup>8</sup> independently; heteroaryl optionally substituted with one or more R<sup>8</sup> independently; =O; =S; -CO-R<sup>5</sup>; -COOR<sup>5</sup>; -O-CO-(C<sub>1</sub>-C<sub>5</sub>) alkyl optionally substituted with one or more R<sup>8</sup> independently; NH(CH<sub>2</sub>)<sub>1-4</sub>NH-aryl; NH(CH<sub>2</sub>)<sub>1-4</sub>NH-heteroaryl; -NHCOR<sup>5</sup>; -SOR<sup>5</sup>; SO<sub>2</sub>R<sup>5</sup>; carboxy; cyano; N-hydroxyimino; nitro; halogen; hydroxy; perhalo C<sub>1</sub>-C<sub>10</sub> alkyl; perhalo C<sub>1</sub>-C<sub>10</sub> alkyloxy; -SH;  $-SR^5$ ;  $-SO_3H$ ;  $-SO_3R^5$ ;  $-SO_2R^5$ ;  $-SO_2NH_2$ ;  $-SO_2NH(R^5)$ ;  $-SO_2N(R^5)_2$ ;  $-CONH_2$ ;  $-SO_3N(R^5)_2$ ;  $-CONH_2$ ;  $-SO_3N(R^5)_2$ ;  $-SO_3N(R$ CONH(R<sup>5</sup>); -CON(R<sup>5</sup>)<sub>2</sub>; C<sub>1</sub>-C<sub>10</sub> alkyloxy optionally substituted with one or more R<sup>8</sup> independently; C<sub>2</sub>-C<sub>10</sub> alkenyloxy optionally substituted with one or more R<sup>8</sup> independently; C<sub>2</sub>-C<sub>10</sub> alkynyloxy optionally substituted with one or more R<sup>8</sup> independently; aryloxy optionally substituted with one or more R<sup>8</sup> independently; heteroaryloxy optionally substituted with one or more R<sup>8</sup> independently; and when two R<sup>4</sup> are attached to the same carbon atom, they, together with the carbon atom, may form a spiroheterocyclic system selected from hydantoin; thiohydantoin; and oxazolidine-2,5-dione;

 $R^5$  is  $C_1$ - $C_{10}$  alkyl optionally substituted with one or more  $R^8$  independently;  $C_2$ - $C_{10}$  alkenyl optionally substituted with one or more  $R^8$  independently;  $C_2$ - $C_{10}$  alkynyl optionally substituted with one or more  $R^8$  independently;  $C_3$ - $C_7$  cycloalkyl optionally substituted with one or more  $R^8$  independently;  $C_3$ - $C_7$  cycloheteroalkyl optionally substituted with one or more  $R^8$  independently; aryl optionally substituted with one or more  $R^8$  independently; aryl  $C_1$ - $C_5$  alkyl optionally substituted with one or more  $R^8$  independently; heteroaryl optionally

substituted with one or more  $R^8$  independently; heteroaryl  $C_1$ - $C_5$  alkyl optionally substituted with one or more  $R^8$  independently;

 $R^6$  is H;  $C_1$ - $C_{10}$  alkyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_{10}$  alkenyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_{10}$  alkynyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloalkyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloheteroalkyl optionally substituted with one or more  $R^4$  independently; aryl optionally substituted with one or more  $R^4$  independently; heteroaryl optionally substituted with one or more  $R^4$  independently;

 $R^7$  is H;  $C_1$ - $C_{10}$  alkyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_{10}$  alkenyl optionally substituted with one or more  $R^4$  independently;  $C_2$ - $C_{10}$  alkynyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloheteroalkyl optionally substituted with one or more  $R^4$  independently;  $C_3$ - $C_7$  cycloheteroalkyl optionally substituted with one or more  $R^4$  independently; aryl optionally substituted with one or more  $R^4$  independently; heteroaryl optionally substituted with one or more  $R^4$  independently;

R<sup>8</sup> is H, amidoxime; nitro, tetrazole; pentafluorophenyl; -CH<sub>2</sub>OH; -CHO; [[-CH(OCH<sub>3</sub>)<sub>2</sub>;]] -COCH<sub>3</sub>; -CF<sub>3</sub>; -CCl<sub>3</sub>; -OCF<sub>3</sub>; -OCH<sub>3</sub>; -CN; -CO<sub>2</sub>CH<sub>3</sub>; -CONH<sub>2</sub>; -CSNH<sub>2</sub>; -CON<sub>2</sub>H<sub>3</sub>; -SO<sub>2</sub>NH; -SO<sub>2</sub>NH<sub>2</sub>; -SO<sub>2</sub>NHCH<sub>3</sub>; -SO<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>; -SO<sub>2</sub> (1-piperazinyl);-SO<sub>2</sub> (4-methylpiperazin-1-yl); -SO<sub>2</sub> (pyrrolidin-1-yl); -SO<sub>2</sub> (piperidin-1-yl); -SO<sub>2</sub> (morpholin-4-yl); N-hydroxyimino; -NH<sub>2</sub>; -NHCH<sub>3</sub>; -N(CH<sub>3</sub>)<sub>2</sub>; -NHCNHNH<sub>2</sub>; -NHCNHNHCH<sub>3</sub>; -NHCSNH<sub>2</sub>; -NHCSNHCH<sub>3</sub>; -NHCONH<sub>2</sub>; -NHCONHCH<sub>3</sub>; -NHCOCH<sub>3</sub>; -NHSO<sub>2</sub>CH<sub>3</sub>; piperazinyl; morpholin-4-yl; thiomorpholin-4-yl; pyrrolidin-1-yl; piperidin-1-yl; halogen; -OH; -SH; -SCH<sub>3</sub>; -aminoacetyl; -OPO<sub>3</sub>H<sub>2</sub>; OPO(OH)(OCH<sub>3</sub>); -PO<sub>3</sub>H<sub>2</sub>; -PO(OCH<sub>3</sub>)<sub>2</sub>; PO(OH)(OCH<sub>3</sub>);

 $R^9$  is H; halogen;  $C_1$ - $C_{10}$  alkyl optionally substituted with one or more  $R^4$  independently  $R^{10}$  is H; halogen;

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or, R<sup>9</sup> and R<sup>10</sup>, together with the carbon atom to which they are attached, may be connected to form a cyclopropyl ring;

or a salt thereof with a pharmaceutically acceptable acid or base;

with the exception of the following compounds:

- 7-(3-Chloro-propyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione;
- 7-(3-Amino-propyl)-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione;
- 3-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydro-purin-7-yl)-propionaldehyde;
- 1,3-dimethyl-7-(2-oxo-propyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 1,3,1',3',7'-pentamethyl-8-piperazin-1-yl-3,7,3',7'-tetrahydro-7,8'-methanediyl-bis-purine-2,6-dione,
- 7-[2-Hydroxy-3-(4-methoxy-phenoxy) -propyl]-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-[2-hydroxy-2-(4-nitro-phenyl) -ethyl]-3-methyl-8-piperazin-1-yl-3,7,8,9-tetrahydro-purine-2,6-dione,
- 7-Benzyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-(4-Chloro-benzyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-(2-Chloro-benzyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-Ethyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3-Methyl-8-piperazin-1-yl-1,7-dipropyl-3,7-dihydro-purine-2,6-dione,
- 3-Methyl-7-(3-methyl-butyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-Butyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3-Methyl-7-(3-phenyl-propyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-But-2-enyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-(3-Chloro-but-2-enyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-Heptyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3-Methyl-7-(1-phenyl-ethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3-Methyl-7-(3-methyl-benzyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3-Methyl-7-propyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione, and
- 3-Methyl-7-pentyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione.

- 2. (Original) A pharmaceutical composition comprising at least one compound according to claim 1 together with a pharmaceutically acceptable carrier or diluent.
- 3. (New) A compound according to claim 1 selected from the following:
- 7-Benzyl-8-(6-hydroxymethyl-[1,4]diazepan-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-8-(6-hydroxy-[1,4]diazepan-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-8-(3-hydroxymethyl-[1,4]diazepan-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 1.3-Dimethyl-7-(4-methylbenzyl) -8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 3-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzonitrile,
- 2-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzonitrile,
- 1,3-Dimethyl-7-(1-phenylethyl) -8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 7-(2-Iodobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 1,3-Dimethyl-8-piperazin-1-yl-7-(2-trifluoromethylbenzyl) -3,7-dihydropurine-2,6-dione,
- 1,3-Dimethyl-7-naphthalen-1-ylmethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 1,3-Dimethyl-7-naphthalen-2-ylmethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 7-(3-Bromobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-8-(3-isopropylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-8-[1,4]diazepan-1-yl-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 1,3-Dimethyl-7-(2-oxo-2-pyrrolidin-1-yl-ethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 2-(8-[1,4]Diazepan-1-yl-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydro-purin-7-ylmethyl) benzonitrile,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 7-(2-Difluoromethoxy-benzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-(2,3-Dimethoxy-benzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione, and
- 1,3-Dimethyl-8-piperazin-1-yl-7-(2-trifluoromethoxy-benzyl) -3,7-dihydro-purine-2,6-dione.
- 4. (New) A compound according to claim 1 selected from the following:

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- 1,3-Dimethyl-8-piperazin-1-yl-7-(2-trifluoromethylsulfanyl-benzyl) -3,7-dihydro-purine-2,6-dione,
- 4-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydro-purin-7-yl) -butyronitrile,
- (R) -7-Benzyl-8-(3-isopropylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- (S) -7-Benzyl-8-(3-isopropylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-8-(6,9-diazaspiro[4.5]dec-9-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-8-(piperazin-3-spiro-3'-bicyclo[2,2,1]heptane-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-methoxy-benzyl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-naphthalen-1-ylmethyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-fluoro-benzyl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-(2-methyl-benzyl) -3,7-dihydro-purine-2,6-dione,
- 7-(2-Chloro-benzyl) -8-[1,4]diazepan-1-yl-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 7-(2-Bromo-benzyl) -8-[1,4]diazepan-1-yl-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-(2-trifluoromethyl-benzyl) -3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-(2-nitro-benzyl) -3,7-dihydro-purine-2,6-dione,
- 3-Benzyl-8-piperazin-1-yl-7-(2-trifluoromethyl-benzyl) -3,7-dihydro-purine-2,6-dione,
- 3,7-Dibenzyl-1-(2-hydroxy-ethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3-Benzyl-7-phenethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3,7-Dibenzyl-8-[1,4]diazepan-1-yl-3,7-dihydro-purine-2,6-dione, and
- 7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione.
- 5. (New) A compound according to claim 1 selected from the following:
- 3,7-Dibenzyl-8-[1,4]diazepan-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,
- 3,7-Dibenzyl-8-[1,4]diazepan-1-yl-1-(2-hydroxy-ethyl) -3,7-dihydro-purine-2,6-dione,
- 2-(3,7-Dibenzyl-8-[1,4]diazepan-1-yl-2,6-dioxo-2,3,6,7-tetrahydro-purin-1-yl) -N,N-diethyl-acetamide,
- 1,3,7-Tribenzyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 1,3,7-Tribenzyl-8-[1,4]diazepan-1-yl-3,7-dihydro-purine-2,6-dione,

- (S)-7-Benzyl-8-(3-benzyloxymethylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 3,7-Dibenzyl-8-piperazin-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,
- 3.7-Dibenzyl-8-[1,4]diazepan-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,
- 3,7-Dibenzyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3,7-Dibenzyl-8-[1,4]diazepan-1-yl-3,7-dihydro-purine-2,6-dione,
- 2-(3-Benzyl-2,6-dioxo-8-piperazin-1-yl-1-propyl-1,2,3,6-tetrahydro-purin-7-ylmethyl) benzonitrile,
- 2-(3-Benzyl-8-[1,4]diazepan-1-yl-2,6-dioxo-1-propyl-1,2,3,6-tetrahydro-purin-7-ylmethyl) benzonitrile,
- 2-(3-Benzyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydro-purin-7-ylmethyl) -benzonitrile,
- 2-(3-Benzyl-8-[1,4]diazepan-1-yl-2,6-dioxo-1,2,3,6-tetrahydro-purin-7-ylmethyl) benzonitrile,
- 3-Benzyl-7-(2-iodo-benzyl) -8-piperazin-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,
- 3-Benzyl-8-[1,4]diazepan-1-yl-7-(2-iodo-benzyl) -1-propyl-3,7-dihydro-purine-2,6-dione,
- 3-Benzyl-7-(2-iodo-benzyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 3-Benzyl-8-[1,4]diazepan-1-yl-7-(2-iodo-benzyl) -3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-3-methyl-8-piperazin-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-propyl-3,7-dihydro-purine-2,6-dione, and
- 7-Benzyl-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione.
- 6. (New) A compound according to claim 1 selected from the following:
- 7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,
- 2-(3-Methyl-2,6-dioxo-8-piperazin-1-yl-1-propyl-1,2,3,6-tetrahydro-purin-7-ylmethyl) benzonitrile,
- 2-(8-[1,4]Diazepan-1-yl-3-methyl-2,6-dioxo-1-propyl-1,2,3,6-tetrahydro-purin-7-ylmethyl) benzonitrile,
- 2-(8-[1,4]Diazepan-1-yl-3-methyl-2,6-dioxo-1,2,3,6-tetrahydro-purin-7-ylmethyl) benzonitrile,
- 7-(2-Iodo-benzyl) -3-methyl-8-piperazin-1-yl-1-propyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -3-methyl-1-propyl-3,7-dihydro-purine-2,6-dione,

- 7-(2-Iodo-benzyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -3-methyl-3,7-dihydro-purine-2,6-dione,
- 3-Benzyl-8-[1,4]diazepan-1-yl-1-(3-hydroxy-propyl) -7-(2-iodo-benzyl) -3,7-dihydro-purine-2,6-dione,
- 3-Benzyl-8-[1,4]diazepan-1-yl-1-(2-ethoxy-ethyl) -7-(2-iodo-benzyl) -3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(3-phenyl-allyl) -3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(2-oxo-2-phenyl-ethyl) -3,7-dihydro-purine-2,6-dione,
- 2-(7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-2,6-dioxo-2,3,6,7-tetrahydro-purin-1-ylmethyl) benzonitrile,
- (7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-2,6-dioxo-2,3,6,7-tetrahydro-purin-1-yl) acetonitrile,
- 3-Methyl-7-(2-methyl-thiazol-4-ylmethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-3-methyl-7-(2-methyl-thiazol-4-ylmethyl) -3,7-dihydro-purine-2,6-dione,
- 3-Methyl-7-(2-oxo-2-phenyl-ethyl) -8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-3-methyl-7-(2-oxo-2-phenyl-ethyl) -3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-3-methyl-7-phenethyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(3-hydroxy-propyl) -7-(2-iodo-benzyl) -3-methyl-3,7-dihydro-purine-2,6-dione, and
- 1-(3-Hydroxy-propyl) -7-(2-iodo-benzyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione.
- 7. (New) A compound according to claim 1 selected from the following:
- 8-[1,4]Diazepan-1-yl-1-(2-ethoxy-ethyl) -7-(2-iodo-benzyl) -3-methyl-3,7-dihydro-purine-2,6-dione,
- 1-(2-Ethoxy-ethyl) -7-(2-iodo-benzyl) -3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -3-methyl-1-(2-phenoxy-ethyl) -3,7-dihydro-purine-2,6-dione,

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- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -1-[2-(2-methoxy-ethoxy) -ethyl]-3-methyl-3,7-dihydro-purine-2,6-dione,
- 7-(2-Iodo-benzyl) -1-[2-(2-methoxy-ethoxy) -ethyl]-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(3,5-dimethoxy-benzyl) -7-(2-iodo-benzyl) -3-methyl-3,7-dihydropurine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl) -1-(3-methoxy-benzyl) -3-methyl-3,7-dihydro-purine-2,6-dione,
- 7-Biphenyl-2-ylmethyl-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,
- 7-(2-Bromo-benzyl) -8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,
- 7-(2-Chloro-benzyl) -8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-(3,5-dimethyl-piperazin-1-yl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 7-(4-Methoxybenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- (1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-yl) -phenylacetic acid methyl ester,
- 7-(5-Chloro-2-nitrobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 4-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzonitrile,
- 7-(4-Methanesulfonylbenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 7-(2-Fluoro-6-nitrobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 7-(4-Benzyloxybenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 7-(2,4-Dichlorobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 1, 3-Dimethyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl) -3, 7-dihydropurine-2, 6-dione, and 1, 3-Dimethyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl) -3, 7-dihydropurine-2, 8-Dimethyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl-8-piperazin-1-yl-7- (4-trifluoromethylbenzyl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-piperazin-1-yl-8-pipera
- 7-Biphenyl-4-ylmethyl-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione.
- 8. (New) A compound according to claim 1 selected from the following:
- 3-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzoic acid methyl ester,
- 4-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) benzoic acid methyl ester,
- 7-Biphenyl-2-ylmethyl-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 7-(4-tert-Butylbenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,

- 1,3-Dimethyl-8-piperazin-1-yl-7-(4-trifluoromethoxybenzyl) -3,7-dihydropurine-2,6-dione,
- 7-(3,4-Dichlorobenzyl) -1,3-dimethyl-8-piperazin-1-yl-3,7-dihydropurine-2,6-dione,
- 1,3-Dimethyl-8-piperazin-1-yl-7-(4-[1,2,3]thiadiazol-4-ylbenzyl) -3,7-dihydropurine-2,6-dione.
- 4-(1,3-Dimethyl-2,6-dioxo-8-piperazin-1-yl-1,2,3,6-tetrahydropurin-7-ylmethyl) -3-methoxybenzoic acid methyl ester,
- 7-Cyclohexylmethyl-1,3-dimethyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-(2,5-diaza-bicyclo[2.2.1]hept-2-yl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 8-(6-Benzyl-[1,4]diazepan-1-yl) -7-(2-iodo-benzyl) -1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- (S) -7-Benzyl-8-(3-hydroxymethylpiperazin-1-yl) -1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1,3-dimethyl-7-(2-oxo-2-pyrrolidin-1-yl-ethyl) -3,7-dihydro-purine-2,6-dione,
- 7-(2-Iodo-benzyl)-1,3-dimethyl-8-(6-pyridin-2-ylmethyl-[1,4]diazepan-1-yl)-3,7-dihydro-purine-2,6-dione,
- 7-(2-Bromo-benzyl)-1,3-dimethyl-8-(6-pyridin-2-ylmethyl-[1,4]diazepan-1-yl)-3,7-dihydro-purine-2,6-dione,
- (S) 7-Benzyl-8-(3-benzyl-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-1,3-dimethyl-8-(3-phenethyl-piperazin-1-yl)-3,7-dihydro-purine-2,6-dione,
- (R)-7-Benzyl-8-(3-benzylpiperazin-1-yl)-1,3-dimethyl-3,7-dihydropurine-2,6-dione,
- 7-Benzyl-8-(3-(2-hydroxy-benzyl)-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione, and
- 7-Benzyl-8-(3-(2-methoxy-benzyl)-piperazin-1-yl)1,3-dimethyl-3,7-dihydro-purine-2,6-dione.
- 9. (New) A compound according to claim 1 selected from the following:
- (R) 7-Benzyl-8-(3-(4-methoxy-benzyl)-piperazin-1-yl)1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- (R)-7-Benzyl-8-(3-(4-hydroxy-benzyl)-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- (R)-7-Benzyl-1,3-dimethyl-8-(3-(4-nitro-benzyl)-piperazin-1-yl)-3,7-dihydro-purine-2,6-dione,

- (R)-7-Benzyl-8-(3-(4-fluoro-benzyl)-piperazin-1-yl)-1,3-dimethyl-3,7-dihydro-purine-2,6-dione,
- (R)-4-(4-(7-Benzyl-1,3-dimethyl-2,6-dioxo-2,3,6,7-tetrahydro-1H-purin-8-yl)-piperazin-2-ylmethyl)-benzonitrile,
- (R)-6-(8-(3-Benzyl-piperazin-1-yl)-1,3-dimethyl-2,6-dioxo-1,2,3,6-tetrahydro-purin-7-ylmethyl)-nicotinonitrile,
- (R)-7-Benzyl-1,3-dimethyl-8-(3-thiazol-4-ylmethyl-piperazin-1-yl)-3,7-dihydro-purine-2,6-dione,
- (R)-2-[1,3-Dimethyl-2,6-dioxo-8-(3-thiophen-2-ylmethyl-piperazin-1-yl)-1,2,3,6-tetrahydro-purin-7-ylmethyl]-benzonitrile,
- 7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(tetrahydro-furan-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-1-(2-cyclohexyl-ethyl)-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(5-methyl-hexyl)-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-[1,4]diazepan-1-yl-3-methyl-1-(3-methyl-butyl)-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-[1,4]diazepan-1-yl-1-(2-ethoxy-ethyl)-3-methyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-(tetrahydro-furan-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,
- 7-(2-Iodo-benzyl)-3-methyl-8-piperazin-1-yl-1-(tetrahydro-furan-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-(tetrahydro-pyran-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,
- 7-(2-Iodo-benzyl)-3-methyl-8-piperazin-1-yl-1-(tetrahydro-pyran-2-ylmethyl)-3,7-dihydro-purine-2,6-dione,
- 7-(2-Iodo-benzyl)-3-methyl-1-(2-phenoxy-ethyl)-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione, and
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-1-(2-methoxy-ethyl)-3-methyl-3,7-dihydro-purine-2,6-dione.
- 10. (New) A compound according to claim 1 selected from the following:

- 7-(2-Iodo-benzyl)-1-(2-methoxy-ethyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 1-(2-Benzyloxy-ethyl)-8-[1,4]diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,
- 1-(2-Benzyloxy-ethyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 1-(3,5-Dimethoxy-benzyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 7-(2-Iodo-benzyl)-1-(3-methoxy-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-(3-trifluoromethoxy-benzyl)-3,7-dihydropurine-2,6-dione,
- 7-(2-Iodo-benzyl)-3-methyl-8-piperazin-1-yl-1-(3-trifluoromethoxy-benzyl)-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(2-hydroxy-propyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(2,2-diethoxy-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dion,
- 8-[1,4]Diazepan-1-yl-1-(2,2-dimethoxy-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(2-[1,3]dioxolan-2-yl-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydropurine-2,6-dione,
- 1-(2-[1,3]Dioxolan-2-yl-ethyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 1-[1,3]Dioxolan-2-ylmethyl-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(2-[1,3]dioxan-2-yl-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,
- 1-(2-[1,3]Dioxan-2-yl-ethyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(2,3-dihydroxy-propyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydropurine-2,6-dione,

- 1-(2,3-Dihydroxy-propyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(3-hydroxy-2-methyl-propyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,
- 1-(3-Hydroxy-2-methyl-propyl)-7-(2-iodo-benzyl)-3-methyl-8-piperazin-1-yl-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-7-(2-iodo-benzyl)-3-methyl-1-[3-(tetrahydro-pyran-2-yloxy)-propyl]-3,7-dihydro-purine-2,6-dione,
- 8-[1,4]Diazepan-1-yl-1-(2-fluoro-ethyl)-7-(2-iodo-benzyl)-3-methyl-3,7-dihydro-purine-2,6-dione,
- 7-Benzyl-8-[1,4]diazepan-1-yl-1-(3-hydroxy-propyl)-3-methyl-3,7-dihydro-purine-2,6-dione, and
- 7-Biphenyl-2-ylmethyl-8-[1,4]diazepan-1-yl-3-methyl-3,7-dihydro-purine-2,6-dione.